

WHAT IS CLAIMED IS:

- 1 1. A method of comprising the steps of:
 - 2 providing a portion of data in response to a counter value being reached, wherein the
 - 3 counter value is stored in a counter that is being incremented at a predetermined
 - 4 rate;
 - 5 determining a current bit rate;
 - 6 determining an desired bit rate over an amount of time;
 - 7 determining a running average based on the current bit rate and the desired bit rate,
 - 8 wherein the running average is further based on a difference between a plurality of
 - 9 desired bit rates and current bit rates; and
- 10 setting the counter value based on the running average.
- 1 2. The method of claim 1, wherein the steps of determining and setting are repeated at a predetermined interval rate.
- 1 3. The method of claim 2, wherein the predetermined interval less than approximately 150 milliseconds.
- 1 4. The method of claim 2, wherein the predetermined interval less than approximately 10 milliseconds.
- 1 5. The method of claim 1, wherein the step of setting the counter value includes using the running average to access a counter value stored in a table.
- 1 6. The method of claim 1, wherein the step of setting the counter value includes using the running average in an equation to determine the counter value.

- 1 7. The method of claim 1, wherein the data is a portion of a packetized multimedia data
2 stream.
- 1 8. The method of claim 1, wherein the portion of data is a data word having a predetermined
2 width.
- 1 9. The method of claim 1, wherein the counter value is stored in a register of first data
2 processor, and step of setting the counter is performed by a host data processor that is
3 different than the first data processor.
- 1 10. The method of claim 1 further including the step of initializing the counter value to a first
2 count based on a calculated time difference, wherein the calculated time difference is
3 based on clock values stored in the data.
- 1 11. The method of claim 10, wherein the first count is further based upon an amount of data
2 stored between the clock values used to determine the time difference.
- 1 12. The method of claim 10, wherein the step of providing includes providing the portion of data
2 to an MPEG audio decoder.
- 1 13. The method of claim 10, wherein the step of providing includes providing the portion of data
2 to the MPEG video decoder.

1 14. A method of comprising the steps of:
2 reading a portion of data in response to a counter value being reached, wherein the
3 counter value is stored in a counter that is being incremented at a predetermined
4 rate;
5 determining a current bit rate;
6 determining an desired bit rate over an amount of time;
7 determining a difference between the current bit rate and the desired bit rate (current bit
8 rate-desired bit rate); and
9 increasing the counter value when the difference is greater than a predefined value;
10 decreasing the counter value when the difference is negative.

1 15. The method of claim 14, wherein the data is a portion of a packetized multimedia data
2 stream.

1 16. The method of claim 14, wherein the portion of data is a data word having a
2 predetermined width.

1 17. The method of claim 14, wherein the step of setting the counter is repeated at a rate less
2 than the predetermined amount of time.

1 18. The method of claim 14, wherein the step of setting the counter occurs at a repeated interval.

- 1 19. A system comprising:
2 a system bus port to couple to a system bus;
3 a system clock;
4 a memory configured as a first in first out memory (FIFO) coupled to the data holding
5 register;
6 a first register coupled to the memory to store a current write location of the first
7 memory;
8 a second register coupled to the memory to store a current read location of the first
9 memory; and
10 a leak rate controller coupled to the memory to control a rate at which data is read from
11 the memory, the leak rate controller further includes
12 a data rate monitor to determine a current data rate;
13 a counter coupled to the system clock to provide a read signal when a predefined value is
14 met, wherein the read signal accesses data stored in the memory.
- 1 20. The system of claim 19, wherein the leak rate controller further includes a filter coupled to
2 the data rate monitor to determine a running average of a difference between the current data
3 rate and a desired data rate.
- 1 21. The system of claim 19 further comprising an audio decoder coupled to the memory.
- 1 22. The system of claim 20 further comprising a video decoder coupled to the memory.
- 1 23. The system of claim 19 further comprising a video decoder coupled to the memory.